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DEVELOPMENT AND TRANSFER OF TECHNOLOGIES

Progress report

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I. INTRODUCTION

A. Mandate

1. The Conference of the Parties (COP), the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI) have requested the secretariat to undertake a number of tasks regarding technology and technology transfer. These include, for example, preparing reports on a survey of technology and technology information needs, on terms of transfer of technology and know-how, on adaptation technology and on options for (an) international technology information centre(s). A detailed summary of requests, as of the fourth session of the SBSTA, may be found in document FCCC/SB/1997/1. Further information may be found in documents FCCC/SBSTA/1997/4, FCCC/SBSTA/1997/6, FCCC/SBSTA/1997/14, and in decision 9/CP.3 included in document FCCC/CP/1997/7/Add.1.

B. Scope of the note

2. This note provides a progress report on the four specific tasks mentioned above. Additional information is provided in a technical paper on terms of transfer of technology and know-how (FCCC/TP/1998/1). Information on options for technology information centres and networks will be available in document FCCC/SBSTA/1998/INF.2, and on the technology needs survey in document FCCC/SBSTA/1998/INF.5. Parties may also wish to consider the previous progress reports on these issues, documents FCCC/SB/1997/3, FCCC/SB/1997/4 and FCCC/SBSTA/1997/10.

C. Possible action by the SBSTA

3. The SBSTA may wish to:

(a) Determine whether to develop a comprehensive strategy for the secretariat's work programme on technology, and, if so, whether to invite one of its officers to conduct informal consultations on this topic at its ninth session. It may also wish to identify topics, in addition to the current mandates, that should be considered in a work programme; and

(b) Request the secretariat to organize a round table on technology and technology transfer during COP 4.

4. In addition, the SBSTA may wish to:

(a) Consider the next steps related to the identification of technology and technology information needs and the means for identifying such needs in the future; and

(b) Consider the functions, types of services and sectors to be covered by an international centre(s) and develop guidance for consideration by the SBI, on the financial and institutional arrangements for such a centre(s) and networks. The SBSTA may also wish to develop further guidance on needs and possible means of enhancing the capacity of national information centres in non-Annex I Parties.

II. FORMULATION OF A PROGRAMME STRATEGY FOR ACTIVITIES RELATED TO THE DEVELOPMENT AND TRANSFER OF TECHNOLOGIES

A. Future work programme

5. The COP, by its decision 9/CP. 3, recently reaffirmed that the secretariat should "continue its work on the synthesis and dissemination of information on environmentally sound technologies and know-how conducive to mitigating, and adapting to, climate change...". However, many of the activities that the secretariat is undertaking, while singularly important, are somewhat fragmented and do not fit into a comprehensive strategy. A list of current tasks may be found in document FCCC/SBI/1997/INF.1 and one suggestion for integrating the programme may be found in document FCCC/SB/1997/4, paragraphs 5-8. In view of the keen interest of developing countries in technology transfer, their need for information on technologies and the key role that technology is expected to play in the implementation of the Kyoto Protocol, the SBSTA may wish to consider whether and how the secretariat's activities should be focused with the objective of ensuring that its work is targeted to the most important issues. Also, the work of other international organizations may need to be further integrated.

6. One way to proceed could be modelled on the approach used by the SBSTA in considering the methodological needs of the Convention. In that process, the SBSTA identified a list of methodological topics and requested the secretariat to consult with other relevant international organizations and to develop a longer-term programme of work. It also requested one of its officers, or a delegate designated by the Chairman, to convene informal open-ended consultations during its sessions.

III. TECHNOLOGY INFORMATION NEEDS SURVEY

A. Introduction

7. The SBSTA, at its second session, requested the secretariat to conduct a survey in order to identify the needs of Parties for information on technologies and know-how to mitigate and adapt to climate change. The secretariat, with the cooperation of the University of Amsterdam (IVAM Environmental Research), conducted an initial survey of non-Annex I Parties to identify their preliminary technology and technology information needs and to test the design of a survey instrument as a means of collecting information.

8. The secretariat reported the results of the initial survey on technology and technology information needs at the fifth session of the SBSTA (FCCC/SB/1997/1). Taking into consideration the guidance provided by the SBSTA at its fifth session, the secretariat has expanded the initial survey of technology and technology information needs of non-Annex I Parties to the Convention (the survey also includes countries with economies in transition). This has been done with the cooperation of the University of Amsterdam.[1]

9. The expanded survey was sent to the national focal points for climate change[2] of all non-Annex II Parties and to some non-governmental stakeholders. As of 31 March 1998, 78 responses[3] from 61 Parties had been received representing all the world's regions.

10. The secretariat will provide the SBSTA with a synthesis report with the main findings of the expanded survey (FCCC/SBSTA/1998/INF.5). The complete report prepared by the University of Amsterdam will also be available.

11. As reported in document FCCC/SBSTA/1997/10, the secretariat is also monitoring projects undertaken by Annex I Parties to cooperate and assist developing countries to identify and analyse their specific technology and technology information needs.

B. Discussion

12. After reviewing the results of the technology needs survey, the SBSTA may wish to consider what the next steps should be. In so doing, it may wish to consider the unique circumstances and capacities of developing countries and countries with economies in transition.

13. Questions Parties may wish to consider include:

(a) What process should be used in the future to further identify technology information needs? For example, should this be a part of national communications?

(b) What should the next steps be to identify specific needs? For example, should sectorial analysis be undertaken to identify specific needs and barriers?

(c) How can the capacity of developing countries be augmented to undertake further analysis on what is needed to overcome the existing barriers?

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[1] This activity is supported by the Government of the Netherlands.

[2] For those Parties that have not yet identified national focal points, the questionnaire was sent to the diplomatic missions in Bonn and to the permanent missions in New York or the ministries of foreign affairs, as appropriate, of those Parties not represented in Bonn or to other focal points suggested by the diplomatic missions.

[3] Including the responses of the pilot phase.

(d) In the case of countries that have identified specific sectorial technology needs, what approach should be considered?

(e) What role could multilateral lending institutions, bilateral programmes and the private sector play in the technology needs assessment process?

IV. TERMS OF TRANSFER

A. Introduction

14. By its decision 13/CP.1 (FCCC/CP/1995/7/Add.1), the COP requested the secretariat to elaborate the terms under which transfers of technologies and know-how could take place. It also requested the secretariat to prepare an itemized progress report (according to the types of activities specified in paragraphs 34.15 to 34.28, inclusive, of chapter 34 of Agenda 21) on concrete measures taken by the Parties listed in Annex II to the Convention, with respect to their commitments related to the transfer of environmentally sound technologies and the know-how necessary to mitigate and facilitate adequate adaptation to climate change.

15. By its decision 9/CP.3, the COP requested the secretariat "to consider specific case studies, as part of its work on terms of transfer of technologies, drawing on the experience of Parties, including demonstration projects, with the aim of evaluating barriers to the introduction and implementation of environmentally sound technologies and know-how, and of promoting their practical application" (FCCC/CP/1997/7/Add.1, para. 2 (c)).

16. The secretariat prepared a technical paper that provided information on trends of financial flows and terms and conditions employed by multilateral lending institutions (FCCC/TP/1997/1). It also prepared a report on activities of Annex II Parties to the Convention, based on their second national communications, related to the transfer of technology, including the financing (FCCC/SBSTA/1997/13). A report on technology transfer is also being prepared by the Intergovernmental Panel on Climate Change (IPCC) and will be available in 1999.

17. To respond to decision 9/CP.3, the secretariat reoriented its planned activities. It is collecting information from the literature and is preparing an initial technical paper on barriers and opportunities related to the transfer of technology in developing countries (FCCC/TP/1998/1). It will review activities, regulations and operating instruments that have been implemented in nine developing countries, namely, Argentina, Brazil, Indonesia, Kenya, Republic of Korea, Senegal, Thailand, Venezuela and Zimbabwe to enhance and promote the transfer of environmentally sound technologies and to remove barriers to the introduction and implementation of such technologies.

B. Discussion

18. The technical paper will examine case studies and will focus on the factors that appear to attract private sector investments and technology in the nine countries, such as their efforts to create stable macroeconomic conditions, transparent laws, open trade and investment policies. It will document efforts to reduce barriers that often inhibit or prevent foreign direct investments, for example, the lack of regulatory frameworks, financial procedures, simple bureaucratic procedures, market transparency, information and intellectual property rights.

19. Finally, it will describe innovative enabling activities being undertaken by governments, such as specific legal instruments, tax regimes that reward technology upgrading, targeted lending programmes from public and private banks, public/private partnerships to support the import/export of environmentally sound technologies, tax refunds or subsidies for the import and implementation of such technologies and clear information about programmes and actions. Also, given the importance of disseminating information on successful cases and lessons in the technology transfer process, the paper will identify a number of processes and activities aimed at transferring information, so as to encourage the replication of projects on a larger scale.

V. ADAPTATION TECHNOLOGY

A. Introduction

20. At its second and third sessions, by its decisions 7/CP.2 and 9/CP.3 respectively, the COP requested the secretariat to expedite the preparation of reports on adaptation technology and to continue its work on the synthesis and dissemination of information on environmentally sound technologies and know-how conducive to mitigating, and adapting to, climate change (FCCC/CP/1996/15/Add.1 and FCCC/CP/1997/7/Add.1).

21. By its decision 9/CP.3, the COP requested the secretariat to continue its work "on the synthesis and dissemination of information on environmentally sound technologies and know-how conducive to mitigating, and adapting to, climate change; for example, by accelerating the development of methodologies for adaptation technologies, in particular decision tools to evaluate alternative adaptation strategies, bearing in mind the work programme on methodological issues approved by the Subsidiary Body for Scientific and Technological Advice at its sixth session" (FCCC/CP/1997/7/Add.1, para. 2 (c)).

22. Also, the Kyoto Protocol includes references to adaptation, for example in its Articles 10 and 12.

B. Discussion

23. The current work programme of the secretariat on adaptation technology has been designed to respond to decisions 7/CP.2 and 9/CP.3. Adaptation methodologies, identified in paragraph 31, are addressed in FCCC/SBSTA/1998/4.

24. Building upon an overview paper on adaptation technologies (FCCC/TP/1997/3), the secretariat has initiated analyses, including consideration of coastal zones and health sectors and of information on adaptation technologies. The work is part of a series of technical reports on adaptation technology in accordance with the work programme (FCCC/CP/1997/INF.1). The secretariat is reviewing national communications and the work of the IPCC. It will develop a technical paper on adaptation technologies in one sector for the ninth session of the SBSTA.

25. Consideration of the clean development mechanism, established under Article 12 of the Kyoto Protocol, suggests that issues relating to adaptation may require clarification and definition in the future. Specifically, attention may need to be given, for example, to elaborating the concepts of assistance, adaptation and cost assessment. A more extensive discussion of the issues related to the Kyoto Protocol may be found in document FCCC/SB/1998/2.

26. In a related activity, the IPCC held a workshop entitled Adaptation to Climate Variability and Change, in Costa Rica from 29 March to 1 April, 1998. The objective of the workshop was to develop a framework for assessing adaptation to climatic variability and change for possible use in the IPCC Third Assessment Report. The report of the meeting, when available, may provide additional information for consideration by the SBSTA on this topic.

VI. CENTRES AND NETWORKS

A. Introduction

27. By its decision 9/CP.3, the COP requested the secretariat "to consult with the Global Environment Facility (GEF) and other relevant international organizations, and solicit information on their capabilities and abilities to support the work of (an) international technology information centre(s), as well as national and regional centres, and to enhance support for national and regional centres, and to report to the SBSTA and SBI on its findings" (FCCC/CP/1997/7/Add.1, para. 2 (b)).

28. Also, at its seventh session, the SBSTA urged Parties "to provide comments on (an) international centre(s) including their possible functions as well as institutional and financial arrangements" (FCCC/SBSTA/1997/14, paragraph 24 (d)).

B. Discussion

29. The secretariat is preparing a document on options for international technology information centres and networks, as well as enhanced national and regional centres (FCCC/SBSTA/1998/INF.2). Further background information is contained in FCCC/SBSTA/1997/10, FCCC/SBSTA/1997/14 and FCCC/SB/1997/4. The SBSTA will also have available submissions from Parties on this subject (FCCC/SBSTA/1998/MISC.4).

30. The secretariat has written to the heads of the GEF and other relevant international organizations including the United Nations Industrial Development Organization, United Nations Development Programme), United Nations Environment Programme, Food and Agriculture Organization, World Health Organization and World Meteorological Organization.

31. In approaching the GEF, the secretariat sought information on the GEF's experience as it relates to this concept, including on how the concept could be integrated with the GEF operational strategy and the conditions to allow for GEF support.

32. In approaching the United Nations organizations and specialized agencies, the secretariat requested information on their capabilities and abilities to support the work of (an) international climate technology information centre(s), in particular:

(a) What international climate technology information activities (systems/centres/networks) are currently underway "in-house" in your organization?

(b) What plans has your organization to enhance its involvement with international climate technology information centre activities?

(c) What, if any, are the institutional, operational, and financial barriers to enhancing your organization's activities related to international climate technology information activities?

(d) What institutional and financial contributions could your organization make to support the work of (an) international climate technology information centre(s)?

(e) Should your organization wish to be considered as the focal point for such (a) centre(s), please provide a brief plan, which could include options, addressing the following:

(i) The functions/services to be provided;

(ii) The institutional arrangements and costs of these functions/services;

(iii) The mitigation sectors and/or adaptation areas to be covered and the extent of the coverage;

(iv) The extent and nature of the coverage of specific/specialist technologies areas and know-how;

(v) Indications of cooperative arrangements with other organizations;

(vi) A proposed management approach.

33. Responses from the United Nations and its specialized agencies will be incorporated into document FCCC/SBSTA/1998/INF.2.

C. Issues for consideration

34. The SBSTA may wish to consider the following questions related to international technology centres and networks:

(a) What kind of information services are desired?

(b) Which mitigation and adaptation sectors/area should be covered?

(c) What level of support should be provided?

(d) How should such (an) international climate technology information centre(s), as well as enhanced national and regional centres, be financed?

35. In considering the above list of questions, Parties may wish to recall that an expert group meeting on technology information centres and networks (FCCC/SB/1997/4) concluded that any new activity concerning enhanced or new international climate technology information centres and networks should be guided by the needs of Parties to fulfil their obligations and commitments under the Convention (including Articles 4 and 6).

36. It has also been noted that any activities to develop capacity at the level of international climate technology information centres and networks, will also depend on the enhancement of existing national and regional technology information centres. Examples of activities at the national level are given in the progress report on the development and transfer of technologies to the seventh session of SBSTA (FCCC/SBSTA/1997/10), and are also described in a report entitled *"Preliminary Review of Existing Technology Information Centres and Networks Supporting GHG Mitigation in Developing and Transition Countries"* from the Climate Technology Initiative (CTI), as available at the seventh session of the SBSTA.

37. The kind of information such centres and networks might provide is varied and comprises:

(a) Technological options for mitigation and adaptation to climate change;

(b) Socio-economic, technical and environmental performance assessments of climate-relevant technologies;

(c) Policy options to facilitate technology deployment;

(d) Financing measures available for technology transfer projects;

(e) Vendors/suppliers/experts;

(f) Case studies of projects and/or capacity-building actions;

(g) Education, training and management;

(h) Science and technology;

(i) Aspects of various relevant guidelines (e.g. for GHG inventories, assessing adaptation options).

38. Centres and networks might also provide information on one or more mitigation sectors, e.g. energy, agriculture, forestry, waste management, transportation and industry, and adaptation areas, e.g. human health, agriculture, coastal zones and small islands, urban areas and freshwater resources. It is not anticipated that an individual centre would be capable of dealing with all sectors and areas, but rather would need to focus initially on a subset.

39. Arrangements for the dissemination of information on climate technology may include the collection and analysis of national and regional data, training, outreach and networking. The CTI report concluded that the Internet, while growing rapidly, was not yet accessible to all Parties.

40. The wider promotion of global access to computers and telecommunications networks is a critical accompaniment to any enhanced centres and networks concept. Efforts to enhance this capacity in developing countries are currently being made by the United Nations Development Programme.

41. Possible options for the level and nature of support for (an) international climate technology information centre(s), as well as enhanced national and regional centres, are described in document FCCC/SBSTA/1998/INF.2.

VII. FUTURE ACTIVITY

Technology round table

42. During COP 3, the secretariat organized a round table, chaired by the Chairman of the SBSTA, on the transfer of technology and know-how.[4] This event was acknowledged as a useful means of involving the private sector in the Convention process because of the dialogue it generated on approaches to the diffusion of environmentally sound technologies.

43. The SBSTA may wish to consider whether an additional round table, perhaps focusing on a particular sector, should be held at COP 4.

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[4] The report of the round table is contained in document FCCC/CP/1997/CRP.5.